

# PAAAS

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# What is PaaS?



## Definition

PaaS is a cloud computing service that provides a platform for customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure. This allows businesses to focus on application development and deployment rather than managing hardware and software.



## Working Mechanism

PaaS providers maintain the hardware and software components required for application development, including servers, storage, and networking, while customers can configure and manage the applications. It brings flexibility and agility to the business.





# Benefits of PaaS

## Scalability

PaaS allows for seamless scalability, enabling businesses to adapt to changing demands and increasing or decreasing resources as needed.

## Cost-Efficiency

With PaaS, businesses can reduce costs as they do not need to invest in and maintain the underlying infrastructure, leading to significant savings.

## Rapid Development

PaaS accelerates application development by providing pre-built development frameworks, leading to faster time-to-market for products and services.

# Enabling Techniques in PaaS

1

## Virtualization

PaaS leverages virtualization to provide a layer of abstraction for hardware resources, facilitating efficient resource allocation and management.

2

## Containerization

Containerization enables the packaging of applications and their dependencies into standardized units, ensuring portability and streamlined deployment.

3

## Microservices Architecture

PaaS embraces microservices architecture, promoting modularity and flexibility through the development of small, independent services.



# PaaS Providers

## **Amazon Web Services Services (AWS)**

AWS provides a comprehensive PaaS suite, offering various services for application development and deployment in the cloud.

## **Microsoft Azure**

Azure provides a robust PaaS environment, focusing on scalability, security, and advanced developer tools to empower businesses.

## **Google Cloud Platform (GCP)**

GCP delivers PaaS solutions known for their flexibility and integration with other cloud-based services, enabling seamless development and management.



# Use Cases for PaaS

## 1 Web Application Development

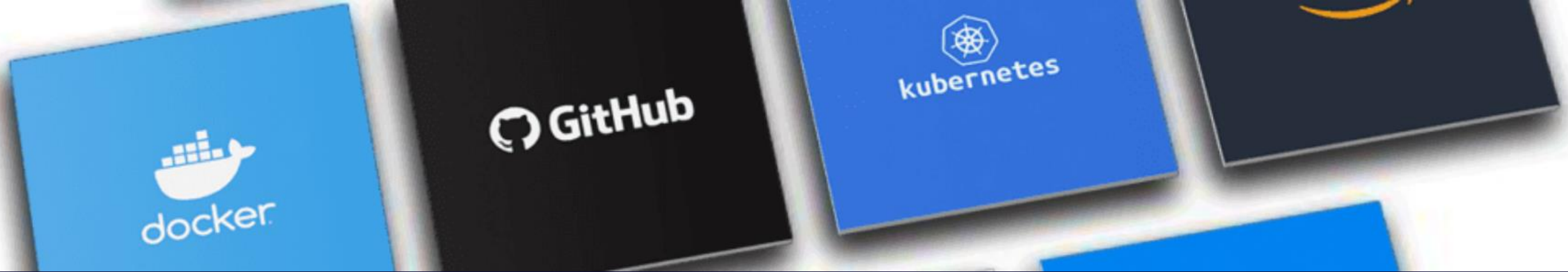
PaaS enables organizations to build and host web applications, leveraging scalable resources and robust development tools.

## 2 IoT Solutions

PaaS supports the development and management of IoT solutions, providing seamless integration and management of connected devices.

## 3 DevOps Automation

PaaS facilitates DevOps practices by automating infrastructure management, deployment processes, processes, and continuous delivery pipelines.



# Key Features of PaaS and Examples

1

## Scalability

PaaS platforms offer scalability features, allowing applications to handle increased workloads without disruption. Example: Elastic Beanstalk by AWS.

2

## Development Tools

PaaS provides robust development tools for creating, testing, and deploying applications. Example: Azure App Service by Microsoft.

3

## Database Management

PaaS includes database management capabilities, offering scalable and secure storage solutions for data management. Example: Cloud SQL by GCP.